AI Planning
Exercise Sheet 13

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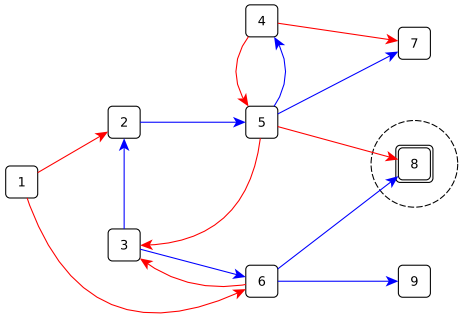
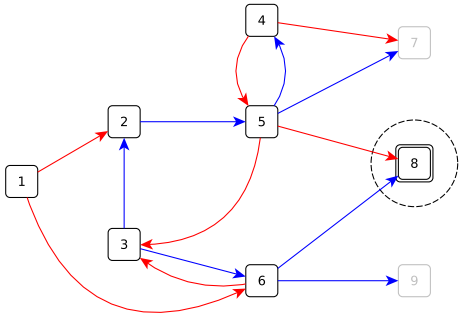
Exercise 13.1

Exercise 13.2

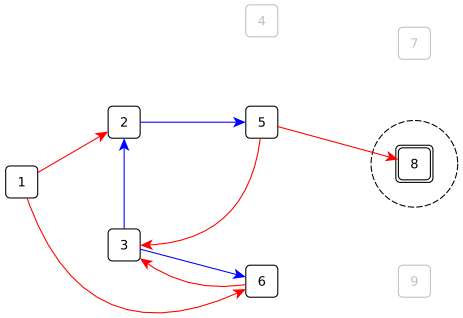
(a)



$C_0 = S$, where $W_1 = \{5, 6\}, W_2 = \{1, 2, 3, 4, 5, 6\}$



$C_1 = \{1, 2, 3, 4, 5, 6\}$, where $W_1 = \{5\}, W_2 = \{2, 5\}, W_3 = \{1, 2, 3, 5\}, W_4 = \{1, 2, 3, 5, 6\}$



$\pi(s_1) = b, \pi(s_2) = a, \pi(s_3) = a, \pi(s_5) = b, \pi(s_t 6) = b$

(b) Let o_l and o_r denote the left and right arc of a nondeterministic operator (when looking in the direction their pointing in).

#	s	π'	fail	π
0			s_1	$\emptyset$
1	s_1	b_l, a, b_l	s_3, s_6	$\{s_1 \to b, s_2 \to a, s_5 \to b\}$
2	s_3	a_r, a_l	s_6	$\{s_1 \to b, s_2 \to a, s_5 \to b, s_3 \to a, s_6 \to a\}$
3	s_6	a_l	s_9	$\{s_1 \to b, s_2 \to a, s_5 \to b, s_3 \to a, s_6 \to a\}$
4	s_9	-	s_6	$\{s_1 \to b, s_2 \to a, s_5 \to b, s_3 \to a, \}$
5	s_6	b, a_l, a, b_l	$\emptyset$	$\{s_1 \to b, s_2 \to a, s_5 \to b, s_3 \to a, s_6 \to b\}$